SiteLines

Issue 113 February 2006

A publication for all members of the NNSA/NSO family

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NTS uses real-world testing to assess and improve radiological sensors

Radiological testing at the Nevada Test Site simulates real-world scenarios, including trucks parked at weigh stations equipped with sensitive detection devices.

by Norma Restivo

Imagine a device so sophisticated that it can detect the miniscule radioactivity that can sometimes emit from such common household items as cat litter or even blueberries.

Such radiological detection systems are now being tested, evaluated, and fine tuned right at the Nevada Test Site (NTS) by the Department of Homeland Security's (DHS) Domestic Nuclear Detection Office (DNDO), with assistance from the National Nuclear Security Administration (NNSA).

A goal of this work is to perfect the sensor systems on the market now so they can more accurately and quickly distinguish less harmful sources used by Americans every day from real nuclear and radiological threats, including the so-called "dirty bombs."

In late January 2006, representatives of DNDO gave several key congressional members, and individuals from national and local media, a bird's-eye view of several specific facets of its domestic nuclear detection initiative now underway at the NTS to do just that.

These include the Advanced Spectroscopic Portal Test Program (ASP), the "Anole" Test Program (which includes portable and mobile detection systems), and the construction of the Radiological Nuclear Countermeasures Test and Evaluation Complex (Rad/NucCTEC), a new facility to support testing. The testing currently underway as part of the ASP and Anole campaigns is now being conducted at an interim facility.

Tour participants included congressional members **Rep. John Linder**, R-Ga; **Rep. James Langevin**, D-R.I.; and **Rep. Charles Dent**, R-Pa. Rep. Linder is chair of the House Homeland Security Subcommittee on Prevention of Nuclear and Biological Attacks; Rep. Langevin is the ranking Democrat on the subcommittee. Participating media outlets included *Associated Press, USA Today*, and Las Vegas television stations KVBC-TV Channel 3 and KLAS-TV Channel 8.

The Rad/NucCTEC, a $33-million facility which will be operational in early 2007, is a multi-use test and evaluation complex that supports the DNDO's mission to develop and support a domestic nuclear detection system. DNDO will support the federal government's mission to detect, report, and interdict any attempts to import or transport a nuclear explosive device, fissile material, or radiological material intended for illicit use.

"We are very proud to support the DNDO mission and proud of the unique capabilities that the Nevada Test Site brings to the table to do so," says **Kathy Carlson**, manager of the NNSA/NSO.

Indeed, the NTS is uniquely qualified to support nuclear detection work, according to **Dr. Richard Tighe**, Bechtel Nevada's assistant general manager of the Homeland Security Technology Program.

"With its remote location, highly skilled workforce, ability to conduct high-hazard work, and security posture, the NTS is well suited for this type of work," says Tighe. "And, the NTS already houses several facilities where experts conduct research, test and evaluation, training, and intelligence activities to support our country's counterterrorism efforts."

While Rad/NucCTEC is under construction, ASP testing has been conducted for several months at a temporary area adjacent to the facility's roughly 11-acre footprint. The eye-opening testing simulates real-life scenarios, including vehicle choke points where detection systems for land-border crossings, toll plazas, and entrances to tunnels and bridges are evaluated.

As part of the Anole Test, there are approximately 30 portable and mobile radiological detection systems being tested and evaluated, from high-tech hand-held and backpack systems to jeeps and vans.

These devices augment the larger, pole-like Radiation Portal Monitors anchored in concrete at the vehicle choke points along a 1,200-foot test track. Right now, more than 600 portal monitors are deployed in nearly a dozen areas

Congressmen Langevin, Dent, and Linder, and Vayl Oxford, DNDO Director, receive DNDO Test Track briefing from Dan Blumenthal, DNDO Test Scientist. (Photos courtesy of Remote Sensing Laboratory.)

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Radiological Monitoring

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around the United States at ports, border crossings, and road inspection stations.

As trucks and other types of transport vehicles pass over the specially constructed portal track, operators monitor the sensor systems to see how accurately they detect planted radiological sources; these include medical and industrial waste and more mundane household items such as fertilizer, ceramic tile, and even produce.

The trick, according to experts, is to fine-tune the first-generation sensors now in use so that next-generation systems can more accurately and quickly identify real threats from radiological and nuclear sources. That way, responders aren't wasting precious time and resources dealing with "false" alarms.

"We are developing the next generation of portal monitors to secure U.S. borders," says **Vayl Oxford**, the director of DNDO. "We want to make these systems easy for people with little technological training to use. Ultimately, nuclear safety falls on federal, state, and local law enforcement personnel."

DNDO coordinates closely with a number of federal agencies as well as state, territorial, tribal, and local governments, and the private sector; what it terms a "multi-layered defense strategy" to protect the nation from a terrorist nuclear or radiological attack. The work at the NTS is a prime example of this collaborative and innovative approach.

"By replicating the real-word environment, including the actual threat materials that may be present and the types of vehicles they may be transported or stored in, we can assess how the sensor devices work now so that next-generation devices will be more efficient," explains Tighe. "More precise detection systems will assist officials in the field and ultimately enhance the safety of America."

Although the appropriate technology is critical to counterterrorism efforts, Oxford stresses that technology alone is not the solution.

"That is why we must work hand-in-hand with well-trained responders at all levels, as well as the larger intelligence and counterterrorism communities," says Oxford.

"We want to make systems easy for people with little technological training to use. Ultimately, nuclear safety falls on federal, state, and local law enforcement personnel."

The NTS to accept mixed low-level waste this spring

by Ron Gibson

Beginning as soon as this March, the Nevada Test Site (NTS) will begin accepting and disposing of mixed low-level waste from approved, off-site generators, further cementing the historically unique role the NTS has played in the safety and security of this nation.

Located in Area 5, the engineered pit used to dispose the low-level radioactive materials and hazardous waste combination is approximately 1,000 feet wide and 40 feet deep. The low-level portion of mixed waste contains radioactive material and generally can be handled without added protection. The hazardous components of the waste are toxic, corrosive, reactive, or ignitable, and are regulated by the Resource Conservation and Recovery Act.

Recently retired Federal Subproject Director **Michael Giblin** said the disposal site will be the final resting place of federally-owned waste generated from several "one-of-a-kind" projects throughout the U.S. Department of Energy (DOE) complex.

"That translates into a mix of low-level radioactive materials and hazardous elements from dozens of sites," said Giblin, who further explained that the disposal of mixed low-level waste is not new to the NTS.

"The National Nuclear Security Administration Nevada Site Office (NNSA/NSO) has long operated a mixed low-level waste disposal cell for the relatively small amount of waste we generate here, so we certainly have the experience and expertise to handle the task we've been charged with," Giblin said. "The difference here is where the waste was generated, the volume, and perhaps, the variety of waste we're receiving."

This is a result of the recently renewed permit under which the mixed low-level waste disposal site is operated. **Ken Small**, current federal subproject director and affiliated general physical scientist, said the Nevada Division of Environmental Protection (NDEP) and DOE have committed to limit the additional disposal volume of mixed low-level waste to 20,000 cubic meters and permanently close the pit in no more than five years - sooner if the disposal site reaches capacity.

"The site poses no risk to the air, water, or animals, but our environmental management professionals and NDEP will continually monitor the site to ensure there are no deleterious effects on the environment," Small said.

Disposal operations personnel guide a forklift to position a drum containing low-level waste within the Pit 9 Grid System at the Area 5 Radioactive Waste Management Site located on the Nevada Test Site.

Face-to-Face

Name: Tom Wilson

Company: NNSA/NSO

Job Title: Business Management Specialist

Hometown: Pickerington, Ohio

Hobbies/ Interests: Baseball, football, tennis, cooking, wine tasting, and traveling

Retirements

Robert Hampton, Lockheed Martin
James Helton, Lockheed Martin
Josephine Pascoe, Bechtel Nevada
David Russell, Wackenhut Services, Inc.
Angelo Smith, Wackenhut Services, Inc.

In Memory

Ernest Bishop, former contractor
Leota Dawson, former contractor
Dorothy Drew, former contractor
Hane Henobio, former contractor
Katsushi Nishimura, former contractor
John Putman, Bechtel Nevada
John A. Slifer, former contractor

Remote Sensing Laboratory supports New Horizon launch

by Cheryl Oar

Five, four, three, two, one…

Liftoff of the New Horizons spacecraft occurred on Jan. 19, 2006, at 2 p.m. Eastern Standard Time from Launch Complex 41 at Cape Canaveral Air Force Station in Florida. While many of the observers at the Kennedy Space Center breathed a sigh of relief as the spacecraft left the platform, the team from the National Nuclear Security Administration Nevada Site Office (NNSA/NSO) and the Bechtel Nevada (BN) Remote Sensing Laboratory (RSL)-Nellis held their breath for a bit longer to make sure the spacecraft cleared the earth's atmosphere without incident.

Bart McGough (R) and **Bill Nickels** (L) monitor communications equipment at the Radiation Command Center (RADCC) on Cape Canaveral Air Force Station in Florida.. (Photos courtesy of Nancie Nickels)

Following launch aboard a Lockheed-Martin Atlas V rocket, the New Horizons spacecraft is headed for a distant rendezvous with the planet Pluto. The journey will cover more than 3 billion miles. New Horizons will zip past Jupiter and conduct science studies in February 2007, and then go into electronic hibernation for much of the cruise to Pluto.

Then in the summer of 2015, the spacecraft will conduct the first close-up, in-depth study of Pluto and its moons. The seven science instruments on the probe will shed light on the surface properties, geology, interior makeup, and atmosphere. As part of a potential extended mission, the spacecraft would then examine one or more additional objects in the Kuiper Belt, an area of the solar system outside of Neptune's orbit, which is believed to contain asteroids, comets, and icy bodies.

The launch demanded a collaborative effort, which the team delivered.

"The NNSA/NSO Bechtel Nevada team was a model of efficiency and teamwork," said **Roger Thompson**, NNSA/NSO lead. "The 40-person BN team worked with personnel from the Kennedy Space Center, the State of Florida, Brevard County, and other NNSA organizations to support NASA both on-site and off-site."

The 1,054-pound, piano-sized spacecraft aboard the Atlas V rocket is the fastest ever launched, traveling at about 36,000 miles per hour. The spacecraft operates on less power than a pair of 100-watt household light bulbs, drawing electricity from a single radioisotope thermoelectric generator (RTG).

"Watching the rocket soar into the heavens was just spectacular," said **Courtney Brown**, the BN mission leader. "Knowing that you played a part in the successful launch instilled a great sense of pride, and I'm sure that everyone involved will have that same wonderful feeling when the spacecraft arrives at Pluto in 2015."

It is the presence of the RTG that brought the NNSA's RSL team to Cape Canaveral. The team had been pre-deployed in case there was a problem with the launch and the spacecraft was forced to return to earth along with the RTG.

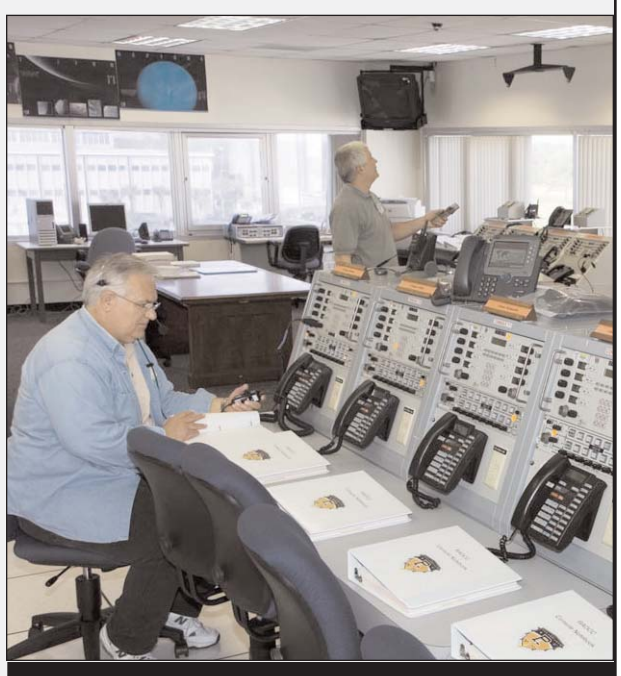
In early December, RSL personnel traveled to Florida to install previously shipped communications equipment. After the completed installation, two individuals stayed through the holidays to perform maintenance and daily performance checks until the main support group arrived. The installation and maintenance team included **Philip Cenicola**, **Hans Devouassoux**, **Scott Hosey, Dave Lunder**, **Bart McGough, Shawn Muehlbauer**, **Bill Nickels**, **Nancie Nickels**, **Doug Tichenor**, and **Ron Wells**.

On Jan. 8, 2006, NNSA and RSL employees traveled to Florida to support the launch. BN supported the event with a Modified Consequence Management Response Team that included satellite communications systems, scientific assessment, Geographical Information System (GIS) and data management capabilities, radiation detection and monitoring capabilities, aerial thermal imaging, and emergency response managers and staff in support of Radiation Command Center (RADCC) and Advanced Launch Support Group (ASLG) operations.

Thompson was stationed at the on-site RADCC. **Colleen O'Laughlin** was the lead person at the off-site Armory location known as the ALSG (Advanced Launch Support Group). **Kevin Rohrer** also supported the effort as a public information officer.

The BN Team included **Allen Allshouse**, **Bob Augdahl, Wayne Bearden**, **Teresa Berstler**, **Courtney Brown**, **Rob Buchheit, Keith Chase**, **Kuan Chin**, **Ai-Lei Chien**, **Bert Cochran**, **Ken Courville**, **Ben Davison**, **Hans Devouassoux**, **Chris Engebretsen**, **James Essex**, **Don Van Etten**, **Hal English**, **Rachel Foster**, **Robert Hayes**, **Scott Hosey**, **Dave Lunder**, **Craig Marianno, Bart McGough, Kevin McNeil, Shawn Muehlbauer, Bill Nickels, Erik Nielsen, John O'Donoghue, Carson Riland, Ryan Smrha, Rich Sorom, Doug Tichenor,** and **Ron Wells**.

Additional RSL-Nellis personnel traveled to Florida on Jan. 12 and 13 to provide an aerial thermal imaging capability with one of the B200 fixed-wing aircraft equipped with the Daedelus 3600 multispectral scanner and the 4kx4k digital frame camera. The latter provided the ability to acquire digital aerial photos capable of producing orthophotos (for maps) and 3600 multispectral imagery at the same time.



Bart McGough and **Bill Nickels** set up communications at the Radiation Command Center before the remaining NNSA/NSO and BN team arrive at the Cape Canaveral Air Force Station.

If there was an anomaly on or near the launch pad, the thermal imaging team would fly the B200 aircraft in an attempt to locate the broken RTG fuel cells. These plutonium-based cells are several 100 degrees C, and as long as they are not in several feet of water would be easily spotted from the air. The thermal imaging team included: **Gary Butler**, **Heather Gledhill**, **Michael Howard, Alan Klawitter, Tim McCreary**, **Marc Rivera,** and **Susan Roberts**.

The launch was successful and the team packed up the equipment and safely returned to Las Vegas.

New Horizons makes a dramatic lift off into the heavens.

News Briefs

Hot energy conservation ideas could translate into cold cash!

by Norma Restivo

If you're an energy-savvy Bechtel Nevada employee, you could win $500 in February!

The energy conservation team that formed last year to evaluate options for energy conservation across the Nevada Site Office (NSO) is considering more than 170 suggestions submitted by eager employees. In response to a presidential directive issued last year, the National Nuclear Security Administration Nevada Site Office (NNSA/NSO) is taking a proactive stance to conserve energy in fiscal year 2006.

"People really put their own thoughtful energy to come up with some of these ideas," says **Robert Noto**, team member and resident Six Sigma Black Belt. "We will comb through these suggestions and give each one a thorough review."

Tom Senteney, NSO representative on the energy conservation team, was also impressed with the level of participation generated by the team's request for energy conservation ideas. "I'm certain that the ideas put forward will assist in the attainment of the NSO's energy conservation goals," comments Senteney.

The top four winning suggestions will garner employees $500 each; winners will be announced and rewarded in February. Team leader **Nelson Cochrane**, manager of Diagnostics and Experimentation Operations for Bechtel Nevada, says that "the only way we're going to save energy is if employees make an effort to conserve in their everyday activities. That means turning off lights, copiers, and printers at the end of the day and doing whatever else it takes to be energy savvy. Saving energy now could keep prices down in the future, which means dollars back in everyone's pockets."

The team is considering or has implemented various measures to save energy, which include the following:

- The Energy Management Systems throughout the NSO complex - which include lighting and thermostats-have been set to conserve energy.
- Office machinery (including copiers) is being shut down at the close of business every day.
- The team is working with the Regional Transportation Commission to get specifics on its ride sharing program and the resources available to jump start the program at the NSO. This will include providing Citizen's Area Transit bus route information.
- The team is reviewing an incentive program for dutiful employees who are going above and beyond the call to conserve energy. More details will follow this year.
- Through the energy management link on the Bechtel Nevada home page, employees can access information on energy savings programs set forth by the utility companies, including Southwest Gas and Nevada Power.
- Employees will receive "consumption trend" data in report form, to see how the company is using energy month to month. This information can be scrutinized and then energy consumption adjusted to control any spikes in usage. "We can't control prices that the utility companies are charging, but we can try to manage our consumption," says Noto.
- The team is promoting the increased use of video teleconferencing-including educating employees on how to use the equipment-to reduce energy-guzzling car trips to the Nevada Test Site.
- The team is collaborating with the Information Services Department and BN Security regarding Net Meeting, a Windows-based, interactive program that allows employees to "teleconference" at their own computer desktops.
- An ongoing initiative will be unveiled this year to keep employees educated and informed about options they can take to reduce consumption at every work area throughout the NSO.

Historic NTS locomotive to be relocated to Boulder City Museum

by Ron Gibson

The apex of the railroad locomotive's importance and popularity is almost exclusively associated with the industrial age, but the upcoming transport of an historic locomotive from the Nevada Test Site (NTS) to a nearby museum sheds some light on the "train and tracks" relevance in the nuclear age as well.

Preparations are underway to move the historic locomotive from the cold bay of the Engine Maintenance and Disassembly (EMAD) building at the NTS to the Nevada State Railroad Museum in Boulder City this March. (Photo courtesy of Reed Poderis.)

Preparations are underway to move a locomotive from the cold bay of the Engine Maintenance and Disassembly (EMAD) building at the NTS to the Nevada State Railroad Museum in Boulder City this March. The General Services Administration transferred ownership of the locomotive to the Nevada State Railroad Museum in April 1997, and the locomotive subsequently was surveyed for contamination and released in August of that year.

"But the museum was unable to come up with the money needed to transport the locomotive until the state legislature authorized funds for the relocation as part of this year's budget," explained **Robert Friedrichs**, a National Nuclear Security Administration Nevada Site Office (NNSA/NSO) physical scientist associated with the safe transport of the historic locomotive.

The locomotive, a standard 80-ton, 56 and one-half gauge, 500 horsepower diesel electric model, was modified by the General Electric Corporation in the early 1960s for use in the Nuclear Engines for Rocket Vehicle Applications (NERVA) program at the Nuclear Rocket Development Station (NRDS) in what is now Area 25. This engine was part of the rolling stock of the Jackass & Western Railroad (J&WRR), a registered shortline with nine miles of track that was not connected to any other rail system. The J&WRR system had been constructed in the early 1960s to transport nuclear rocket engines from their assembly buildings to various engine test locations and back.

How to move the behemoth of a machine seems an obvious concern. But **Reed Poderis,** a Bechtel Nevada Environmental Restoration (ER) Task Manager geologist charged with leading preparations for the transport, said the museum organizers' expertise in moving equipment like this voided that dilemma.

The state has made arrangements to transfer the mechanical beast of burden via a specially-designed, oversized tractor trailer used to carry payloads weighing up to 150 tons. The Nevada Site Office is funding preparations to make the train accessible to transporters as part of their Deactivation and Decommissioning of the EMAD facility where it is currently stored.

"They sort of chuckled when we expressed some concern about potential difficulties moving the locomotive," Poderis said. "This is considered a mid-sized, somewhat routine transport for them."

The springtime relocation is anything but perfunctory for the NTS, said Poderis, who expects it to take up to a week to dismantle the 25- by 15-foot wall section that must be removed so museum-contracted transporters can load the locomotive onto the tractor trailer.

Said Poderis of the project, "The railroad museum and NNSA have been anxious to get this locomotive moved to Boulder City for preservation. I am honored that the ER group is involved."

Beyond the call

From quiet commuter to consummate hero - meet George Salyer!

by Davey Matthews


George Salyer

What was to be a quiet commute home for Bechtel Nevada Duty Manager **George Salyer** turned into a battle to save an auto accident victim from his burning vehicle.

When George completed his shift at the Nevada Test Site (NTS) Operations Coordination Center (OCC) Saturday morning, Dec. 31, 2005, he headed home, looking forward to New Year's eve with his family.

Just past Indian Springs on U.S. Highway 95, he saw a cloud of dust and dirt. A north-bound vehicle had left the roadway and rolled, coming to rest on its wheels. George used the next cut over to go north to the accident and was the first person to arrive on the scene.

"All glass in the vehicle was gone and flames were starting to come from under the hood into the car," said George. "I discovered one male occupant who was unconscious, belted in the driver's seat." He then determined the accident victim had a pulse and with the fire getting worse, made the decision to get him out of the car.

As George was struggling to free the man from his seatbelt, an off-duty Creech Air Force Base (AFB) firefighter arrived with a fire extinguisher and attempted to put the fire out, but with no success. At this point, the heat from the flames was so intense that George noticed his DOE badge - which he was still wearing - was starting to melt.

"I tried to release the seat belt with no success as it had too much tension on it," explained George. "By this time another motorist arrived and I instructed him to try to release the belt as I eased the tension. This worked."

With the driver free from his seatbelt, they now faced another problem - both doors were jammed shut from the rollover. George reached through the passenger's side window, grabbed the victim under the shoulders, and somehow found the strength to pull the man through the window. At some time during all this, George received first-degree burns to his face and singed his hair.

The other passerby helped with the seat belt, and the off-duty firefighter supported the injured driver's legs and helped George carry him away from the accident scene. When George had the chance to look back at the vehicle, it was fully engulfed in flames.

Later, Creech AFB Fire Department arrived to extinguish the car fire and paramedics tended to the victim until the helicopter could arrive to transport him to the hospital. George also received treatment for the facial burns he had received.

While waiting for the helicopter, George thought he would help by collecting belongings that were ejected from the car.

"I found his wallet and a German to English dictionary. I informed the paramedics and the Nevada Highway Patrol (NHP) that he was a German national and I could speak some German to him if needed," George said.

George completed a report for the NHP and waited until the victim was airlifted to University Medical Center. Then he calmly drove the government vehicle to the motor pool, got his personal vehicle, and went home.

The driver survived. On Jan. 4, 2006, George and his wife (who grew up in Germany) visited the young man in the hospital. His injuries kept him from traveling home for several weeks.

George checked on the young man daily and during his convalescence kept his German family informed of his progress. George later opened his home to the motorist, who had nowhere else to recuperate from his injuries, and also provided clothing and other essentials.

"He (the driver) had some follow-up care for his burns, but his collapsed lung did heal," said George, adding that the individual has returned to his European home.

It is noteworthy that George is a retired officer from the U.S. Air Force, where he served 25 years. He feels that his military training did come into play during his efforts to assist the motorist.

George shrugs off his role in saving the young man, noting: "I have a son his age and would hope someone would do the same for him."

BN achieves 8 million hours without a lost time incident

Bechtel Nevada (BN) recently achieved eight million hours without a lost-time incident!

"What a great way to begin 2006," said BN President and General Manager **Dr. James E. Powell**. "For 17 months, we have managed to maintain our record of no lost-time accidents. I thank each and every one of you for your commitment to being 'best in class'."

Over the past several years, BN implemented various safety initiatives that helped propel the company toward this new record.

These include raising safety awareness throughout the company, reinforcing Integrated Safety Management principles and functions, refining work control, and instituting new safety incentive programs.

Making safety a part of its everyday practices reflects BN's new safety culture that is an integral part of its operations and culture. Eight million hours without a lost time injury is the highest achieved in the history of the Nevada Test Site.

As BN moves forward toward 9 million hours, its goal will continue to be: "Zero accidents...no compromise."

Six Sigma improves distribution of employee service awards

A 2004 Employee Satisfaction Survey indicated a general dissatisfaction with Bechtel Nevada employee Site Service Award packets. Workforce Enhancement (WE) Manager and Six Sigma Champion Jennifer Morgan decided to take action using the Six Sigma methodology to analyze and improve the current process. The goal of the Process Improvement Project (PIP) was to increase employees' satisfaction with the Site Service Awards recognition process.

During the "analyze" phase of the Six Sigma process, the team identified the problem. Managers had no clear instructions on the appropriate methods or timeliness for distributing employee Site Service Award packets. The team took action. Specific guidelines were drafted and distributed to managers/supervisors with the next set of employee Site Service Award packets.

These guidelines stated that packets should be distributed as soon as possible after receipt, but no later than 60 days after initial receipt; packets should be presented in an appropriate setting, such as safety meetings or department all-hands; packets should not be mailed to recipients through the in-house mail system, or left on a chair, desk, or in a mail slot.

As a control method, employees were given a "return receipt" requesting information on the date and method their Site Service Award packet was distributed to them. Since this process began, WE has received about 50 percent of these "return receipts."

Although the majority of the completed forms indicate that awards were given out in a timely and appropriate manner, some did not. In order for WE to continue to improve the Site Service Awards program, employees are reminded to return the return receipt, which documents when and how a Site Service Award is received.

If you have any questions on the Site Service Awards program, contact **Debi Foster** at **(702) 295-3986**.

As it winds down, grant program has made its mark

by Michelle Meade

As sites across the U.S. Department of Energy's (DOE) complex reach their cleanup goals, shipments of low-level waste to the Nevada Test Site (NTS) for permanent disposal are declining. Consequently, the Emergency Preparedness Grant Assistance Program, which is funded through the low-level waste disposal program, is tapering off as well. But what a difference the program has made!

For the past five years, the Emergency Preparedness Grant Assistance Program has made significant contributions to rural communities throughout Nevada -- providing unprecedented levels of emergency preparedness training and resources. Since 2000, the NTS Waste Management Program has charged waste generators a fee of $0.50 per cubic foot of waste disposed at the NTS to fund the grant program. The grant benefits the six counties (Clark, Elko, Esmeralda, Lincoln, Nye, and White Pine) impacted by the rerouting of low-level waste out of the Las Vegas Valley. The Nevada Division of Emergency Management (NDEM), which administers the allotments on an annual basis, will continue to provide funding to these counties until funds are exhausted.

For **Fire Chief Jeff Knudtson** of the West Wendover Fire Department in Elko County, the funding provided its Hazmat Technician Response team with much-needed equipment and emergency response training. "We wouldn't have any of the equipment we have now if it weren't for this grant," said Knudtson.

He further credited the grant for the team's newly acquired training. "Every member of the department (three full-time and 25 volunteers) is now certified in the following: fire fighting, auto extrication, high and confined space rope rescue, Emergency Medical Training (EMT) basic medical response, all hazard specialized response to radiological and hazardous materials incidents, building code compliance, fire inspections, arson investigation, and public education."

Margie Gunn, Director of the Office of Emergency Management, coordinates the allocation of Lincoln County's grant funding. Gunn commented on the recent ground breaking of a new firehouse in Pioche noting that the "Lincoln County Emergency Response personnel are so excited they don't know what to do with themselves."

The funds were also responsible for Lincoln County's new ambulances and a vital communication system powerful enough to reach all parts of the county. "Without the help of this grant," according to Gunn, "we could not have accomplished what we have in the past five years."

To date, more than $8 million in funds have been distributed to affected counties-funds that were obviously put to good use…funds that will continue to make a tremendous difference in the years to come.

Lincoln County Microwave Communications Tower

Candlelighters recognize standout generosity"

by Helen Stolz, Chair of Candlelighters Toy Drive

Each year the Stoller-Navarro Joint Venture (SNJV) Associates Program (SNAP) participates in a toy drive for the Candlelighters for Childhood Cancer of Southern Nevada (Candlelighters). The event is always a huge success with toys, games, cash, and gift cards being donated by every associate. These items are presented to Candlelighters to ensure that every child with cancer is assured of having toys and gifts on special occasions throughout the year.

This year SNAP decided to also participate in the Candlelighters "Adopt-A-Family" holiday program and because of the generosity experienced in the past, asked for a larger family with a child in treatment. Thus, SNJV was matched with the Mars Galez family: Mom (Lydia), Dad (Mars Sr.), MaryLynn, Mark, Mars Jr., and Michelle.

An angel tree was constructed and each SNJV associate selected an item from the tree to buy for a family member. And of course, the Christmas spirit abounded and there were many presents and gift certificates for everyone.

Mars Galez Jr. is a delightful 10-year-old boy who was diagnosed in August 2004 with Acute Lymphoblastic Leukemia. The family had just arrived in Las Vegas from the Philippines and Mars' mother was starting work at the University Medical Center as a nurse.

The child's diagnosis was unbelievably hard to comprehend. But this strong family of six united and while Mom worked, Dad stayed at home and with the help of eldest daughter MaryLynn they were able to ensure that the other children were cared for and that Mars Jr. received all the care he needed.

Although times have been tough during the year since Mars was diagnosed, he is currently doing well and is on maintenance chemotherapy. Our goal is to stay in contact with this family to let them know that our hearts were not only with them at Christmas but we will be there to provide encouragement throughout the new year.

Candlelighters is a nonprofit organization that assists families of children with cancer throughout the Las Vegas area. Each year they have between 50 and 60 new diagnosis. Children range in age from birth to 21 years. Candlelighters is currently providing services to 400 families.

Candlelighters does not pay any medical expenses nor do they provide monies for research. Services include paying rent, utilities, and car payments; travel expenses for treatments including meals, rooms, and gas; funeral expenses; meal tickets while in the hospital; transportation to and from doctor appointments; counseling; education; and daily hospital visits by Candlelighter volunteers or staff. Adopt-A-Family is only one of the many programs provided for families. The reason it is so important is because of the financial burden created by having a child with cancer.

SNAP will continue to provide toys and will participate in the Adopt-A-Family holiday program through Candlelighters as part of their charitable giving program. This year as in the past, nearly $3,000 in gifts and cash were donated for this event. I am amazed at the generosity of the SNJV employees, which is not only evident during Christmas but when other events happen during the year. They are a great group of people and I am proud to be a part of this very caring and compassionate organization.

The Galez Family visits SNJV to receive gifts and meet the employees.

"I am amazed at the generosity of SNJV employees, which is not only evident during Christmas but when other events happen during the year."

Great-horned owls at NTS eventually create a win-win situation for all

By Derek Hall

When the Nevada Test Site (NTS) gets a lot of precipitation, wildlife is sure to follow.

Due to the abundant rainfall last fall and winter (over twice the normal amount from October 2004 to March 2005), numerous birds were attracted to the NTS to breed and raise their young. Unfortunately, some of the nest site locations were in active project areas. For example, a pair of great-horned owls, complete with four eggs in a cozy stick nest, took up residence in a tall, open building at Test Cell A on the NTS.

However, due to the thoughtful diligence of Nevada Site Office (NSO) personnel, the U.S. Fish and Wildlife Service (FWS), and an organization called the Wild Wing Project, the birds were later moved to a location where they could be nurtured and eventually released. But before that occurred, the situation had to be carefully assessed and evaluated.

The whole scenario began when the Environmental Restoration group, who was conducting D&D (Decontamination & Decommissioning) activities at the Test Cell A complex, notified Bechtel Nevada (BN) biologists that a pair of owls was nesting in a building. A biologist visited the site to determine if eggs were present, since it is against federal law (Migratory Bird Treaty Act) to destroy egg-laden nests.

By using a man-lift, the biologist was safely able to determine that four eggs were present. In early March, a FWS special agent made a visit to decide if project activities could continue without harming the nest or the eggs.

The agent later determined that continuing with the current work schedule could be detrimental to the eggs. Experts then considered the following options:

- Delay the project until the young grew sufficient plumage to fly, which occurs about 12 weeks.
- Move the building since it was partially on rail road tracks.
- Move the nest to a nearby, more suitable location.
- Take the eggs to the Wild Wing Project, which is equipped to incubate and raise the young. This Las Vegas-based project works with the FWS to rehabilitate injured or dis placed birds.

After consultations among BN biologists, Environmental Restoration personnel, Wild Wing and FWS, it was decided that the fourth option was best because the project could not be delayed, it was not safe to move the building, and there was not a suitable nest site close enough to ensure the parent owls could find the nest again.

Typically, FWS does not allow nests to be disturbed. However, according to BN biologist **Derek Hall**, "because of the close working association NSO biologists have had in the past with FWS, they knew that BN and the National Nuclear Security Administration were acting in good faith to protect the eggs while still allowing for work to continue."

On March 21, 2005, the four eggs were removed and delivered to Lisa Ross with the Wild Wing Project in Las Vegas. One egg did not hatch, one owl was released in June 2005 at Corn Creek (Desert National Wildlife Range), one owl was released Aug. 1, 2005, at Cane Spring on the NTS, and one owl is still awaiting release at Wild Wing. The project, through Environmental Restoration, donated money to Wild Wing to help offset the cost of raising the young.

"During an October (2005) field trip with NNSA/NSO Manager Kathy Carlson, the juvenile owl was seen at Cane Spring," said Linda Cohn, Environmental Protection manager for NNSA/NSO. "It is always exciting to see the wildlife at the NTS but especially in this instance. This shows how our mission work can be accomplished while still protecting the environment."

*This golden-eyed owl was released back to the rich habitat of the Nevada Test Site. (Photo courtesy of **Derek Hall**)*

Ultimately, the owl situation was a definite win-win for both the project and the owls.

Face-to-Face

Name: Angelica Russell

Company: Stoller-Navarro Joint Venture

Job Title: Data Analyst

Hometown: Mabini, Philippines

Hobbies/ Interests: Playing tennis and table tennis, bowling, hiking, watching chick flicks/blockbuster movies with my daughter on opening day, shopping, and traveling to Hawaii.

Tips for preventing vehicle backing accidents

There are approximately 6.5 million vehicle accidents in a typical year and 2.8 percent involve backing. The majority of these backing accidents can be prevented by using defensive driving techniques such as backing slowly, looking over your right shoulder while backing, checking the rear and side view mirrors, and watching side clearances as you proceed slowly.

Discussion of Activities: During the past year, there have been several vehicle backing incidents at the Nevada Test Site. Although there were no serious injuries, there has been property damage to vehicles and lost productivity caused by the downtime of the equipment during the repair and investigation process.

Analysis: During one incident, neither driver saw the other while they were backing. Both drivers used their rearview mirror before proceeding to back from their parking spot. However, each did not see the other in time to prevent the collision.

Recommended Actions: The following are recommendations to reduce the possibility of backing accidents:

- If possible, park where backing is not necessary.
- Walk around your vehicle before entering and starting the engine to ensure you know the path is clear and that it's safe to proceed.
- When there are two people in one vehicle, have the passenger spot from outside the vehicle when backing.
- Before backing, sound your horn two quick beeps to alert others of your vehicle.
- Park where backing does not involve negotiating your vehicle in or around a potential problem.
- Look over both your left and right shoulder and back slowly.
- Check rear and side view mirrors and watch side clearances.
- Do not rely totally on mirrors; also turn around and look.
- Have the driver's window open to so you can hear any verbal warnings.

"Think and check before you reverse your vehicle," says **Tony Renk**, Stockpile Stewardship Programs and Operations safety manager for Bechtel Nevada. "And, drive government vehicles as if you owned them."

MILESTONES

Bechtel Nevada

40 years — *Las Vegas* - **Michael Carlisle**

35 years — *Nevada Test Site* - **Johnnie Brown**

30 years — *Los Alamos Operations* - **Ronald Sturges**

25 years — *Las Vegas* - **Gaylene Parmenter, Randy Rohde;** *Nevada Test Site* - **Billy Hollimon, John Kitt, Ronald Riggs;** *Remote Sensing Laboratory-Nellis* - **David Mitchell**

20 years — *Las Vegas* - **Carol Lisor**

15 years — *Special Technologies Laboratory* - **Arturo Alvarez;** *Remote Sensing Laboratory-Andrews* - **Jean Momb**

10 years — *Nevada Test Site* - **Tuesday Benshoof, Charles Cozby, Charles May, Joseph Simko,, L. W. Van Alstine, Gary Webb;** *Special Technologies Laboratory* - **Thomas Keenan**

5 years — *Las Vegas* - **Marcus Dixon, Darrell Hutchinson, Russell Lahoud, Dorothy Peters, Norma Restivo, Brian Sheridan, Kathleen Vaselopulos;** *Nevada Test Site* - **Eugene Bitton, Robert Cinelli, Michael Crawford, Adam DaeGorn, Ronnie Espinoza, Charles Garrett, Ronald Jackson, Michael Levine, Richard Lucas, Mark McClelland, Timothy McLemore, James Peters;** *Livermore Operations* - **Joseph Delash;** *Remote Sensing Lab-Nellis* - **Ronda Fulkerson, Tuyet Nguyen**

Environmental Protection Agency

15 years — **Gregory Budd**

Defense Threat Reduction Agency

30 years — **Larry Gabriel**

Desert Research Institute

15 years — **Barbara Holz-Montemayor**

10 years — **Elizabeth Spencer**

Sandia National Laboratories

5 years — **James Jones**

Wackenhut Services, Inc.

15 years — **Lawrence Archuleta, Kenneth Herrera, James Underwood**

5 years — **Carol E. Starzinsky**

New Hires

Las Vegas: **George Alcalde, Sheppy Herskovic, Mark Leopardi, Darlene Meissner, Bruce Morrow, Lee Rogers, Manuel Sifuentes;** *Los Alamos Operations:* **Scott Borror, Brian Cox;** *Nevada Test Site:* **Bradley Anderton; Melissa Cabble, Dustin Cole, James Harris, Mark Kaplan, Darrell LaMastus, Jerry Lilley, Rustin Long, Robert Milton, Francis Palmer, Robert Parmley, Michael Salloum;** *Remote Sensing Laboratory-Nellis:* **Steve Carpenter, Benjamin Sher**

Face-to-Face

Name: Kay Hurt

Company: Wackenhut Services, Inc.

Job Title: Security Specialist

Hometown: Rockville, Md.

Hobbies/ Interests: Reading, video poker, Cat's Meow collection, and travel to the East Coast to visit family and friends

The following acronyms appear frequently in *SiteLines*:

BEEF	Big Explosives Experimental Facility
BN	Bechtel Nevada
CTOS	Counter Terrorism Operations Support
DAF	Device Assembly Facility
DOE	Department of Energy
EM	Emergency Management
EM	Environmental Management
ES&H	Environment, Safety, and Health
FRMAC	Federal Radiological Monitoring and Assessment Center
JASPER	Joint Actinide Shock Physics Experimental Research (gas gun)
LANL	Los Alamos National Laboratory
LLNL	Lawrence Livermore National Laboratory
NNSA	National Nuclear Security Administration
NSO	Nevada Site Office
NTS	Nevada Test Site
PIP	Process Improvement Project
R-MAD	Reactor Maintenance, Assembly, and Disassembly Facility
RSL-A	Remote Sensing Laboratory - Andrews
RSL-N	Remote Sensing Laboratory - Nellis
SC	NNSA Service Center
SCE	Subcritical Experiment
SNJV	Stoller-Navarro Joint Venture
SNL	Sandia National Laboratories
STL	Special Technologies Laboratory
WSI-NV	Wackenhut Services Incorporated - Nevada

...To your health...

February is National Heart Health Month. Coronary heart disease ranks as America's number one killer. Approximately one million previously healthy people have their first heart attack every year. Do not wait for a heart attack to happen. Now is the time to evaluate your risk of heart disease and focus on diet and exercise.

What are risk factors for heart disease that can be changed?

- **High blood pressure**: Over time high blood pressure can damage arteries to your heart by accelerating the buildup of fatty deposits.
- **Elevated serum cholesterol**: This is a large part of the risk for fatty deposits that can clog your heart arteries.
- **Elevated Low Density Lipoprotein (LDL)**: This is considered the "bad cholesterol" and is a significant component in the development of fatty build-up within the arteries (this is called atherosclerosis).
- **Low levels of High Density Lipoprotein (HDL)**: HDL is considered protective and called the "good cholesterol."
- **Cigarette smoking**: Smoking and long-term exposure to second-hand smoke can damage the interior walls of your arteries. This allows cholesterol to collect and block the flow of blood. A smoker's risk of a heart attack is more than twice that of non-smokers and cigarette smoking is the biggest risk factor for sudden cardiac death.
- **Obesity**: This raises the risk of heart disease because it is usually associated with high blood cholesterol, lower HDL (good cholesterol) and elevated triglycerides.
- **Diabetes**: This speeds up atherosclerotic changes and has a negative effect on cholesterol levels. Diabetes increases the risk of heart disease by 500 percent in women.
- **Left ventricular hypertrophy**: This is an enlarged ventricle in the heart due to uncontrolled hypertension or previous heart muscle injury.
- **Cocaine use**: This affects the rhythm of the heart causing an irregular heart beat.
- **Amphetamines**: This raises blood pressure and heart rate.
- **Behavioral factors (stress)**: You may overeat or smoke to relieve stress, which increases your risk of heart disease. Also, stress can raise blood pressure.
- **Homocysteine**: High levels of this blood chemical have been strongly associated with the risk of heart disease.

Risk factors that cannot be changed:

- **Age**: The risk of cardiovascular disease increases as we age, but attention to diet and fitness may delay degenerative changes.
- **Gender:** Men are more likely than women to develop coronary heart disease at an early age. After menopause, women's risk of heart disease becomes equal to a man's.
- **Heredity**: People with a known family history of heart disease are at increased risk and should be evaluated on a regular basis by their personal care physician.

Recommendations for change:

- **Regular medical checkups**: Your doctor can perform tests to monitor your risk of heart disease.
- **Smoking**: If you smoke, quit. This is one of the most important things you can do before or after having a heart attack.
- **Healthy diet**: Eat a diet low in saturated (animal) fats and increase fruits, vegetables, and grains. You should have no more then 30 percent of total calories from fat daily.
- **Manage your weight** through exercise and diet.
- **Exercise 30 minutes at a time** three to four times a week, which elevates HDL.
- **Cholesterol**: Patients over the age of 20 should be measured every five years to ensure their cholesterol is at an appropriate level.
- **Control your blood pressure**: The newest protocol for a normal blood pressure for adults 18 and over is a Systolic pressure <120 and a Diastolic pressure <80.
- **Estrogen**: Women in peri-menopause or menopause should consult with their physician regarding hormone replacement therapy due to the increased risk of heart disease during these years (there is controversy regarding hormone replacement therapy and heart health.)
- **Alcohol intake**: Temperate alcohol consumption can be beneficial to heart health (this means one drink per day).
- **Stress Relief**: Seek out methods to alleviate stress, including meditation.
- **Regular aerobic exercise**
- **Individual counseling**
- **Group therapy**
- **Relaxation and behavior modification techniques**

If you feel stressed, call the Employee Assistance Program **(EAP)** at **(702) 295-0917.** Employee Assistance Specialists **Kevin Broadbent** and **Patsy Molina** are available to help you explore options for stress reduction and stress management.

Warning signs and symptoms of a heart attack

Seek medical attention if you have the following symptoms:

- Pressure, fullness, squeezing, or pain in the center of the chest that lasts more than a few minutes or goes away and comes back
- Increasing episodes of chest pain
- Pain that spreads to the shoulder, neck, or arms an impending sense of doom
- Unsteadiness or confusion
- Sweating, nausea, and/or shortness of breath
- Lightheadedness or fainting
- Chest pressure that becomes worse on exertion (climbing stairs, etc.)

Less common warning signs and symptoms of a heart attack

- Abnormal chest, stomach, or abdominal pain
- Nausea, dizziness, or shortness of breath (without chest pain)
- Unexplained anxiety, weakness, or fatigue
- Palpitations, cold sweats, or paleness

Have a plan in place in the event of a heart attack

- Learn what steps to take if you or someone else is having a heart attack.
- Discuss with your family, children, and friends what measures they should take.
- Keep contact information with you to give to medical personnel. Maintain a current list of all medications (prescriptions and over the counter medications, vitamins, and herbs). Also, keep your medical history handy.
- Check with groups in your area for classes in Cardiopulmonary Resuscitation (CPR).

A heart attack happens when the coronary artery becomes blocked, usually when a blood clot forms after years of fatty deposits and cholesterol buildup in the artery. One of the earliest predictors of an attack is increasing episodes of chest pain called angina, caused by temporary, insufficient blood flow to the heart.

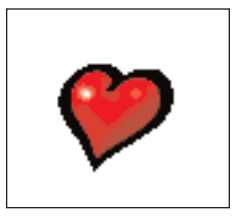
If a cardiac emergency occurs:

- Call 911 or seek emergency medical help immediately
- Take an aspirin
- Recognize the warning signs of a cardiac arrest.
- Learn to give CPR (Cardiopulmonary Resuscitation)

For more information on Heart Health, please see the following Web sites:

- www.mayoclinic.com
- www.heartinfo.org/
- www.americanheart.org/
- www.heartpoint.com/

Please call BN Occupational Medicine providers **Robin Ireland** at **(702) 295-4736,** or **Karen Sondrol-Maxwell** at **(702) 295-1474,** with any questions.



CALENDAR OF EVENTS

February 20
NNSA/NSO and contractor offices closed in observance of Presidents' Day

March 23
NTS Public Tour, open to interested members of the public. Sedan Crater, Frenchman Flat, Non-Proliferation Test and Evaluation Complex, T-1 Training Area drive by, Bilby Crater, Area 5 Low-level Radioactive Waste Management Site, Apple II houses. Contact **Brenda Carter**, BN **(702) 295-0944**.

Declassified Film Showings
For information on declassified film showings at NTS CP-1, call (702) 295-4015. For information on declassified film showings at NTS Yucca Mountain, contact **Rod Rodriguez** at **(702) 295-5825**.

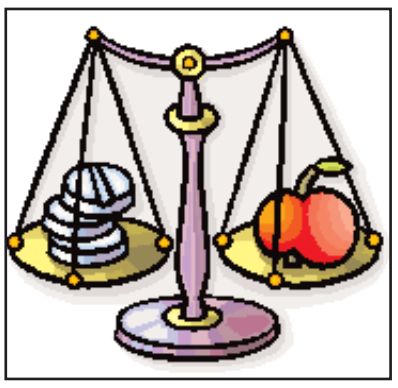
Upcoming Conferences, Meetings, and Trade Shows

February 12-15
The Idaho Section of the American Nuclear Society will sponsor "Sharing Solutions for Emergencies and Hazardous Environments" in Salt Lake City at the Marriott downtown. Prospective session topics include Robotics and Remote Systems and Emergency Preparedness and Response. To register, go to http://www.2006sharingsolutions.com/

February 15-17
The Infrastructure Security Partnership will hold its 5th Annual Congress in conjunction with the Critical Infrastructure Resilience Conference and Expo. The joint conference will feature in-depth workshops, tabletop and red team exercises, panel discussions, and keynote presentations by top officials from the White House, Department of Homeland Security, Congress, the intelligence community, industry, government, academia, and European and Asian counterparts. The program will feature a national perspective on critical infrastructure resilience through the integration of physical, cyber, and operational security. For additional information about the Congress, visit http://www.protectinfrastructure.com.

February 26-March 2
The International Society for Optical Engineering presents, "Smart Structures and Materials and NDE for Health Monitoring and Diagnostics," in San Diego, Calif. at the Town and Country Resort & Convention Center. Sessions include Adaptive Structures & Mechanisms; Smart Structures & Vehicles; Actuators and Damping; Biometrics; Embedded Sensors and Sensor Networks. To register, go to http://spie.org/Conferences/programs/06/ss/.

February 27-March 2
The 3rd annual R&D Electrical Safety Meeting and Workshop will be held in Albuquerque, N.M., Feb. 27 through March 2. Sponsored by Los Alamos National Laboratory, this event could influence standards that may affect national research and development pertaining to electrical safety. Topics include electrical hazard classification, training, equipment inspection, personal protective equipment, accelerator and pulsed power electrical safety, and radio frequency hazards. There is no registration fee; the event will be held at DOE's Energy Training Complex on Kirtland Air Force Base. For more information, access theWeb site: http://www.lanl.gov/orgs/hsr/electrical_safety/.



February is:

Wise Health Consumer Month

and

National Heart Health Month

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